WHAT IS CLAIMED IS:

1.   A method for determining characteristics of an input
      image, the method comprising the steps of:

      receiving a single pixel stream of the input image;

5   sub-sampling data from the single pixel stream at
      programmable intervals; and

      creating a histogram with characteristics of the input
      image based on the sub-sampled data;

2.   The method according to Claim 1 wherein the step of
10   receiving the single pixel stream further comprises the
      steps of:

      scanning the input image; and

      pre-analyzing the input image to compensate for
      inadequacies associated with scanning.

15 3. The method according to Claim 1 wherein the single pixel
      stream is sub-sampled on a line basis.

4.   The method according to Claim 1 wherein the single pixel
      stream is sub-sampled on a pixel basis.

5.   The method according to Claim 1 wherein the histogram
20   maintains data to determine whether the input image is
      color or black and white, photo or text, low in contrast
      or high in contrast, and dark or light.

6.   The method according to Claim 1 further comprising the step of determining a maximum and minimum value, a first and last value, and an average value for each characteristic of the input image.

7.   The method according to Claim 1 further comprising the step of substituting transition pixels with stable pixels to compensate for sampling effects.

8.   The method according to Claim 1 wherein single pixel stream is truncated to a minimal number of bits to reduce a depth of the histogram.

9.   The method according to Claim 1 wherein determining characteristics of the input image facilitates subsequent imaging processing functions.

10.   An apparatus for determining characteristics of an input image, the apparatus comprising:

      receiving means for receiving a single pixel stream of the input image;

      sub-sampling means for sub-sampling data from the single pixel stream at programmable intervals; and

      a histogram that maintains characteristics of the input image based on the sub-sampled data;

11.   The apparatus according to Claim 10 wherein the receiving

means stream further comprises:

a scanner for scanning the input image; and

pre-analysis means to compensate for inadequacies associated with scanning.

5   12.   The apparatus according to Claim 10 wherein the single pixel stream is sub-sampled on a line basis.

13.   The apparatus according to Claim 10 wherein the single pixel stream is sub-sampled on a pixel basis.

14.   The apparatus according to Claim 10 wherein the histogram

10   maintains data to determine whether the input image is color or black and white, photo or text, low in contrast or high in contrast, and dark or light.

15.   The apparatus according to Claim 10 further comprising a means for determining a maximum and minimum value, a

15   first and last value, and an average value for each characteristic of the input image.

16.   The apparatus according to Claim 10 further comprising a means for substituting transition pixels with stable pixels to compensate for sampling effects.

20   17.   The apparatus according to Claim 10 wherein single pixel stream is truncated to a minimal number of bits to reduce a depth of the histogram.

18. The apparatus according to Claim 10 wherein determining characteristics of the input image facilitates subsequent imaging processing functions.